

AMENDMENTS TO THE SPECIFICATION

In the specification, at page 12, replace the paragraph at line 20 through line 24 with the following:

Egress controller 271 provides functions necessary to carry out teachings of the invention set forth herein. The Egress controller could be a programmed computer, ASIC, PLA or other circuit arrangements. The controller could be any combination of recited entities. The program to control the programmable computer consists of computer readable code stored in a computer readable medium.

Replace the paragraph at page 25, lines 21 through 30 with the following:

If ~~not~~ such a mechanism is not available, or used, a third approach to the grooming of CRI CAM can be performed. Then, according to a preferred embodiment of the invention, there is a scrubbing routine (figure 8) which, as a background task, continuously goes through all CRI CAM entries (800) that are in use (those NOT in FEL). Time stamp and active A bit fields shown in figure 5 are checked (810, 820). Thus, among the non-active flows (812), those having a time stamp older than a predetermined value (821) can be withdrawn hence, automatically preventing CRI CAM from over filling.

Replace the paragraph beginning at page 25, line 31 with the following:

It should be clear, however, that dimensioning CRI CAM for a given application requires ~~this latter~~ the CRI CAM to be

large enough to support all flows that need to be active together while the switch is up and running.

Replace the paragraphs at page 26, lines 5 through 22 with the following:

First, like with CRI CAM above, depending on the applications, nothing specific may have to be done. There may have be applications where there are fewer flows used than the number of available uncommitted registers. In which case there is no real need to release any buffer.

However, in the general case there will be fewer registers than the number of flows to be supported. As a consequence, in a preferred embodiment of the invention, registers must be released to FRL when there is not any no packet left in egress buffer for a flow. To this end, state diagram of figure 7, that describes the process of forwarding a packet, must be modified as shown in figure 9. When a next entry is not found (932) one must check if there is any packet left in egress buffer. If none are left (933) then, register can be released to FRL and active A bit of CRI CAM reset (980). Hence, in this case, WPC is a mandatory feature and corresponding steps are no longer optional. The rest of the forwarding algorithm is not otherwise modified.

Replace the paragraph beginning on page 26, line 23 with the following:

Figure 10 briefly discusses the problem of the wrapping (1000) of the source counters used to number the packets. Those counters have a finite length thus, whichever their counting capacity the problem of their wrapping must be solved. The invention assumes that those counters,

implementation of which is shown in figure 3, have one bit more (1060,1070) than what is necessary to number the packets. For a given application the counting capacity (1020) must be determined so that the oldest numbered packet still waiting in the egress buffer (1030) cannot be wrongly compared with a new arriving packet pertaining to the same flow because the counter used in the source has wrapped in the mean time. Once this value has been determined the invention assumes that the counters are all made one bit wider so that numbering of waiting packets cannot span on more than one counter wrapping boundary (1050). Then, it is easy to take care of the counter wrapping. One solution ~~consists in~~ detects the first occurrence of a readout packet number for which MSB (most significant bit) is found to be 0 (1060) after a series of ones. In which case the egress resources must immediately start to use PSN fields in toggling the value of the MSB bit.